

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improved Dispensing Carton

We, KIMBERLEY-CLARK CORPORATION, a corporation organized and existing under the laws of the State of Delaware, United States of America, of 130 N. Commercial Street, Neenah, State of Wisconsin, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to a dispensing carton for sheet material which is arranged in a stack so as to be self-feeding as the sheets are withdrawn from the stack.

This invention provides a carton for dispensing sheets arranged for sequential feeding comprising means defining the walls of a generally rectangularly-shaped box having top, bottom, side and end panels, and means defining a dispensing opening in the top panel of said carton comprising a curved, linear cut extending the length of said carton.

The invention also provides a blank for forming a carton as described above, wherein said blank comprises a unitary flexible sheet material including top, bottom, side and end panels defined by crease lines and cuts formed in said sheet, and means defining a dispensing opening in said top panel comprising a curved, linear cut extending the length of the carton and terminating at the crease lines defining the opposite ends of said top panel.

The invention further provides a blank for forming a carton as described above, wherein said blank comprises a unitary sheet structure including top, bottom, side and end panels defined by crease lines and cuts formed in said sheet, and means defining a dispensing opening in said top panel portion comprising a linear cut extending lengthwise of said top panel and including a pair of oppositely curving portions disposed in spaced-apart relation and defining a pair of fingers which extend generally transversely of said top panel.

The principal objects of the present invention are to provide an improved carton for

dispensing sheet material arranged for sequential feeding, and to provide a carton having a novel form of dispensing opening which is particularly effective in relieving the carton top panel of pressure thereon due to the high bulk of the stack of sheets, in restricting the area of the sheet dispensing opening, and in separating the sheets as they are withdrawn from the carton.

Certain exemplary embodiments of the invention are illustrated in the accompanying drawings, wherein:—

Fig. 1 is a perspective view of a carton embodying a dispensing opening in accordance with the invention;

Fig. 2 is a perspective view showing the carton of Fig. 1 in use;

Fig. 3 is a sectional view, taken along the line 3—3 in Fig. 2;

Fig. 4 is a plan view of a blank for forming a carton of the type shown in Figs. 1 and 2;

Figs. 5 through 7 are plan views of three modified forms of the invention;

Fig. 8 is a perspective view of still another modified form of the invention;

Fig. 9 is a perspective view showing the carton of Fig. 8 in use;

Fig. 10 is a sectional view taken along the line 10—10 in Fig. 9; and

Fig. 11 is a plan view of a blank for forming a carton of the type shown in Figs. 8 and 9.

Despite the fact that very large numbers of dispensing cartons are in daily use, especially in the dispensing of interfolded cleansing tissues and similar products, the available cartons are not wholly satisfactory. This is particularly true in cartons for dispensing the larger size package of tissues, i.e., those containing a relatively large number of sheets.

With products such as tissues the atmospheric conditions, particularly humidity, and the method of handling the product in its formation and packaging greatly affects its bulk. Consequently, a stack of tissues containing, for example, 400 separable units or sheets may vary as much as one and one-half inches

[d.]

in height. It will be apparent, therefore, that a suitable carton must accommodate this difference in the size of the tissue stacks. Further, it is undesirable to provide a carton on the basis of the greatest expected bulk, in view of the wide variation, since the minimum size package will then be too loose in the carton and will convey to the customer the impression of containing less than the specified number of sheets. It is desirable and customary, therefore, to provide cartons of a size which accommodate average bulk tissue.

When high bulk tissue is made, and a substantial amount of all tissue is in this classification, the cartons are very tightly filled and it is very difficult to withdraw the upper tissues without tearing them. This problem increases with the number of tissues in the package, since the pressure exerted by the tissues on the top of the carton increases accordingly and makes it more difficult to separate and remove the top few tissues.

The packaged tissues are desirably interfolded so as to make possible sequential, one-at-a-time feeding of the tissues from the carton. In one of the more popular types of inter-folding, each individual tissue, which is usually of duplex construction, is folded intermediate its length in contact with a second tissue, in such relationship that the fold in one tissue essentially coincides with the severance line in the other tissue. By this arrangement, the withdrawal of one tissue moves a portion of the next adjacent tissue and makes possible the desired, convenient, one-at-a-time feeding. The sequential feeding of the sheets is additionally assured, in one instance, by providing a very light bond between the tissues. This bond aids in pulling the succeeding sheet from the carton but is easily broken to separate the uppermost sheet from the pack.

It is difficult, however, in utilizing known types of dispensing cartons to maintain sequential feeding when the tissues get low in the box, particularly with stacks having greater than about 150 to 200 double ply, single folded sheets. In the known types of cartons there is a tendency for the tissues to fall back into the box after the top sheet has been separated from the pack, and in the deeper boxes it is difficult to reach the tissues near the bottom of the box once they have dropped back into the box.

Furthermore, as the pile of sheets diminishes in the box and the angle at which the sheets are moved toward the dispensing opening approaches the vertical, it becomes more difficult to separate the sheets and, consequently, there is a tendency to withdraw a plurality of sheets instead of but one as desired. Accompanying this difficulty in separating the sheets is a tendency to lift or move the carton, which is due primarily to the fact that the force required to separate the sheets near the bottom of the stack causes the nearly empty carton to

be displaced from its normal position of rest. This latter difficulty is particularly disturbing when the user attempts to withdraw a tissue and has only one hand available for the job.

The present invention overcomes the above-mentioned difficulties and provides a carton which can accommodate either high bulk or low bulk tissue without hampering the withdrawal of the initial sheets, while maintaining the proper sequential feeding of the tissues throughout the entire pack. Further, the present invention facilitates the opening of the carton and provides better access to the tissue stack, if such becomes necessary for any reason, without exposing any great area of the stack when the carton is in its open condition.

With reference now to the drawings, wherein one embodiment of the invention is illustrated in Figures 1 through 4, it is seen that there is provided a carton 10 having a dispensing opening 12 defined in the top of the carton. More particularly, as seen in Figure 4, the carton is formed from a generally rectangularly-shaped, paperboard blank 14 having fold or crease lines 16 therein defining the bottom 18, top 20 and side walls or panels 22 and 24. Each of these walls include tab portions at opposite ends thereof for forming the ends 26 of the carton, and there is also provided a narrow strip 28 adjacent the free side of the bottom-defining wall 18 of the blank to afford means for securing the bottom to the side wall 24.

The dispensing opening 12 is formed by a perforate line 30 in the top panel 20 which extends between diagonally opposite corners of the carton. As illustrated in Figure 1, the line 30, which may be a continuous cut if desired, starts at one corner and curves to the center of the top panel 20, and then takes an oppositely curving, similar path and terminates at the diagonally opposite corner. In this manner, the curved dispensing opening is symmetrical with respect to the intersection of the longitudinal and transverse axes of the carton and, therefore, may be described as being centro-symmetrical. More particularly, the curve formed by the opening is such that for any given value of abscissa the ordinates for the plus and minus values of such abscissa will be equal numerically but one ordinate will be of a minus value. This centro-symmetrical feature of the curve is important in that it provides for a balancing of the forces exerted on the top panel during withdrawal of a tissue therefrom, and thus prevents tipping of the box during such use.

It is also important that the dispensing opening extends across the length of the carton, that is, the dimension of the carton which extends in the direction of the fold of the tissues. The top of the carton is thereby divided lengthwise into relatively narrow sections which are quite flexible and which yield more readily to the pressure of the tissue pack. Furthermore, the type of opening

afforded by the present invention exposes virtually none of the surface area of the tissue pack in the carton when in use. Thus the pack is effectively protected at all times, from any contamination by dirt etc. from outside the carton.

The dispensing opening 30 is preferably formed by a single line perforation, so that the adjoining edges of the top panel remain in substantial contact after the carton is opened. Such a perforation is hereinafter referred to as a "linear cut". Further, since the abutting edges are quite flexible, because of the relatively long and narrow top panel portions formed in opening the box along the line 30, much of the pressure of the pack on the carton top is relieved and easy access to the upper sheet and free withdrawal thereof is afforded. As a sheet is withdrawn, there is sufficient parting of the edges of the dispensing opening 30 to permit easy withdrawal of the tissue. However, as the tension on the sheet is released, the edges resume their generally coplanar, abutting relationship and grasp the projecting sheet therebetween. This feature is important in preventing the sheet from falling back into the box. Thus with interfolded sheets, or similar arrangements for providing sequential feeding of the tissues, the succeeding sheet is always held in partially projecting relation to the carton in position for use. This is particularly advantageous when a relatively deep carton is employed and it would otherwise be difficult to reach a sheet near the bottom of the carton without tearing the carton.

It is also important to note that the curving or deviating path of the line forming the dispensing opening 30 is effective in producing a curve in the tissue sheets as they are withdrawn and left projecting from the carton. The curvature thus provided for the limp tissue sheet provides sufficient rigidity for the sheet to cause it to assume a generally, normally extending relation to the box, as seen in Figure 2. Thus the sheet is maintained readily accessible at all times and does not tend to lay across the top of the box, as is the natural tendency of the limp sheets ordinarily used for cleansing tissues and the like.

A further advantage to the single line or slit type of opening disclosed herein, is that it aids in preventing the feeding of a plurality of sheets through the opening and restricts the withdrawal to a desirable one-at-a-time procedure. Where a wider opening of two dimensions is provided, it has been found that as the stack of sheets in the carton gets low, the withdrawal of a tissue frequently carries with it one or more additional sheets which can readily pass through the wider opening. With the restricted opening provided herein, there is little opportunity for this to happen. Further the curving disposition of the dispensing opening distributes the withdrawal or pulling force on the upper folded tissue in a manner such that it tends to peel the folded

tissue from the pack, rather than lift it in a more direct manner as when a straight slotted opening is used. This novel manner of withdrawing the tissue tends to discourage the lifting of more than the desired single tissue, which will be followed by the interfolded, or otherwise associated, succeeding tissue in the intended manner.

A modified form of the invention is illustrated in Figure 5, wherein the top panel 40 of a carton 42, otherwise similar to that disclosed in Figures 1—4, includes a curving dispensing opening 44 which extends lengthwise of the box between the opposite ends thereof. The opening 44 is again preferably formed by a curved perforated line which is disposed in centro-symmetrical relation to the intersection of the transverse and longitudinal axes of the carton and which extends generally along the latter axis. In order to provide sufficient flexing of the two sections of the carton top, when the perforated line is broken, it is necessary that at least a minimum amount of curvature be provided for the line 44. In this respect, it is believed that for a carton having a width "w" the maximum ordinate of the curved opening, as indicated at "a", should preferably be at least $1/8 w$. It will be understood that while the line 44 should be symmetrically disposed with respect to the intersection of the longitudinal and transverse axes, it is not essential that the ends of the line be disposed on the longitudinal axis and may be spaced therefrom as indicated in Figure 5.

A further modification is illustrated in Figure 6, wherein the top panel 50 of a carton 52, otherwise similar to those above, has a curving dispensing opening 54, which extends lengthwise of the carton and terminates at positions spaced intermediate the longitudinal center line and the corner of the box. The opening 54 is centro-symmetrical with respect to the intersection of the longitudinal and transverse axes of the box in order to balance the tissue withdrawal forces on the box, and affords a flexing of the top of the carton, in the above described manner.

Still another modified form of the invention is shown in Figure 7, wherein the dispensing opening 60 in the top panel 62 of a carton 64 includes a central, straight line portion 66. The extension of the central portion 66 is in the nature of a pair of similar but oppositely curving slits or cuts which terminate at positions spaced from diagonally opposite corners of the carton. If desired, of course, the opening 60 may end at the corners of the box in the manner of the dispensing opening 12 of Figure 1, or may extend to the ends of the box in the manner of the opening 54 in Figure 6.

It is also be noted that the opening 60 in Figure 7 is centro-symmetrical with respect to the intersection of the longitudinal axis "x" and the transverse axis "y" of the carton, as in the previous embodiment. Thus the carton

top is divided lengthwise into two similar portions which are flexible to provide the advantages discussed above.

With reference now to the particular embodiments described above, it is believed that a summation of some of the common characteristics of such embodiments will serve to more clearly present the invention. First of all, the centro-symmetrical feature of the curved openings is important in providing a balanced condition during withdrawal of the tissues and in affording a maximum relief of the bulk pressure on the top of the carton. Further, it is important to achieving best results that the dispensing opening in the carton top be substantially longer than the width of the tissue sheets, that is, the dimensions along the fold or lengthwise of the box, as defined. In this respect, it is preferable that the ends of the dispensing openings terminate at a position along the edge of the carton top within the end one-fourth of the carton top.

It has also been determined that for best results the line intersecting the ends of the curved opening should pass through the center of the carton top and form an angle no greater than 45 degrees with the longitudinal axis. This is illustrated in Figure 7 wherein the line $d-d$ joins the ends of the curved opening 60 and thus defines with the longitudinal axis "x" the angle "α". The centre of the top is, of course, the intersection of the longitudinal axis "x" and the transverse axis "y".

Some of the factors in determining the particular curve to be used for the dispensing opening are the weight and rigidity of the cardboard used in making the carton. These factors, as well as the amount and type of paper to be dispensed, will all influence the bulk pressure on the carton top and the reaction thereto and should be considered in selecting an opening.

It is also important that the dispensing opening terminate at its opposite ends at an edge portion of the box, if full benefit is to be gained as to the flexibility of the carton top in yielding to the bulk pressure of the tissue.

Then too, it should be appreciated that by providing a curved dispensing opening in the general manner described, there is in effect provided a variable width opening which will open in accordance with the bulk pressure on the carton top. Further, such openings effectively seal the tissue against contamination at all times, and yet afford adequate access to the inside of the carton in the event it is desired to withdraw a bundle of tissues.

Still another embodiment of the invention is illustrated in Figs. 8-11, wherein there is shown a carton 68 having a dispensing opening 70 defined in the top of the carton. More particularly, as seen in Figure 11, the carton is formed from a generally rectangularly-shaped, paperboard blank 72 having fold or crease lines 74 therein defining the bottom 76, top

78, and a pair of side walls or panels 80 and 82. The panels 76, 78, 80 and 82 include tab portions 77, 79, 81 and 83, respectively, at opposite ends thereof for forming the ends 85 of the carton, and there is also provided a narrow strip 84 adjacent the free side of the bottom-defining wall 76 of the blank to afford means for securing the bottom to the side wall 82.

The dispensing opening 70 is formed by a linear cut 86 in the top panel 78, which extends from one end of the carton to the opposite end. The line 86, which may be either in the form of a continuous cut or an interrupted cut, such as the perforated line shown in Fig. 8 of the drawings, starts adjacent one end of the carton at a position 87 a short distance into the end flap 79 and crosses the end edge or fold 88 and extends into the top panel 78. The line 86 then curves toward the side edge of the top panel 78 before taking a relatively sharp, reverse curve to form the curved section indicated at 90. The dispensing opening continues from the curved section 90 with an oppositely curving section 92 which terminates in a central portion of the line 86. This central portion of the opening-defining cut 86 is generally straight in the illustrated embodiment, and the dispensing opening continues at the other end of the carton in curving sections 92a and 90a, which are similar to sections 92 and 90, respectively, but which curve in opposite directions. The section 90a of the opening ends in a cut 87a extending into the adjoining end flap 79. In this manner, the dispensing opening is preferably made symmetrical with respect to the intersection of the longitudinal and the transverse axes of the carton. This centro-symmetrical feature of the access opening offers an important advantage in that it provides for a balancing of the forces exerted on the top panel during withdrawal of a tissue therefrom, and thus aids in preventing tipping of the box during such use. Although the central portion of the illustrated opening 70 is generally a straight line which is inclined slightly with respect to the longitudinal axis of the carton, it will be apparent that certain features of the described embodiment have utility with other forms of dispensing openings.

A very important feature of the embodiment seen in Figs. 8-11 is the provision of means for effectively separating each sheet from the remainder of the stack as it is withdrawn from the carton. More particularly, it will be noted that the curving line 70 which forms the dispensing opening includes the oppositely but similarly curving end portions 90 and 90a, which are joined at their inner ends to the central section of the dispensing opening through another pair of oppositely curving portions 92 and 92a, respectively. These oppositely curving flap or finger portions 92 and 92a are particularly effective with stacks of

interfolded tissues, in alternately acting upon the second sheet in the stack to deter the movement of this sheet through the opening 70 and thereby aid in the withdrawal of the first sheet.

- 5 Further, if the interfolded sheets are held together by bonds, the flaps 92 and 92a provide a resistance to the withdrawal of the second sheet to thereby facilitate breaking of the bond holding the leading or first sheet.
- 10 This action of the flaps or fingers 92 and 92a is illustrated in Fig. 10 where it is seen that the finger 92 bears against the leading edge of the second sheet S_2 , to hold back the latter as the first sheet S_1 is being withdrawn through the dispensing opening. In the illustrated example, the sheets are lightly bonded together, as well as interfolded, and the bond holding the first sheet S_1 is indicated at "b" on the side of the second sheet S_2 opposite the
- 15 finger 92 and generally adjacent the fold in the second sheet S_2 . Consequently, in holding the second sheet S_2 , the finger 92 permits more of the withdrawal force to be applied to the breaking of the bond "b" which is holding the first sheet against separation from the stack. Similarly, after sheet S_1 is removed and sheet S_2 becomes the leading sheet, the finger 92a at the opposite end of the carton is effective in assisting in the separation of the sheet S_2 from its succeeding sheet S_3 . The latter are bonded together at b_1 (Fig. 10) and the succeeding sheet S_3 is, therefore, disposed to the left of sheet S_2 . Consequently, the finger 92a is disposed to engage the upper edge of sheet
- 20 S_2 and retard its movement as sheet S_3 is withdrawn from the carton.

- It is seen, therefore, that the function provided by the fingers 92 and 92a is important in making possible the one-at-a-time withdrawal of the sheets from the carton. An additional advantage is gained as the stack nears the bottom of the carton and the force required to separate the top sheet from the stack may be sufficient to lift or tip the nearly empty box.
- 25 With the fingers 92 and 92a acting in the described manner, a greatly reduced force is sufficient to separate the leading sheet from the stack and, consequently, there is little or no tendency to move the box while making the withdrawal of the leading sheet.

- It is also to be noted that the projection of the flaps 92 and 92a toward the sides of the carton distributes the withdrawal or pulling force on the upper folded tissue in a manner such that it tends to peel the folded tissue from the stack, rather than lift it in a more direct manner as when a straight slotted opening along the carton center line is used.

- The use of a linear cut for the dispensing opening 70 and the extension of the ends 87 and 87a of the cut into the end panels 79 of the carton also provide certain other advantages. For example, this arrangement divides the carton top into two relatively narrow sections, which are sufficiently flexible to accom-

modate opening of the carton and withdrawal of the upper tissues without damaging the carton or the sheets, when the carton is tightly filled with high bulk tissue.

Furthermore, the adjoining edges of the dispensing opening remain in substantial contact after the carton is opened to hold a projecting sheet therebetween in the manner described with respect to the previous embodiments.

It is also important to note that the curving or deviating path of the line forming the dispensing opening 30 is effective in producing a curve in the tissue sheets as they are withdrawn and, therefore, provides sufficient rigidity for the sheet to cause it to assume a generally, normally extended relation to the box, as previously described.

Then too, the disposition of the end cuts 87 and 87a, as described in connection with Figs. 8-11, is particularly effective in preventing tearing of the carton during use. In the formation of cartons of the type generally used to contain cleansing tissues and the like, it is customary to have the fibers in the paperboard extending transversely of the length of the box, otherwise the carton will not have a well defined shape and be sufficiently rigid. This necessary arrangement of the fibers, however, makes the paperboard relatively weak in the direction of the fibers. Consequently, there is a tendency for the carton to tear along the direction of the fibers, when the carton is opened and/or during use of the carton as a tissue dispenser. The greatest source of difficulty in this respect is at the ends of the dispensing opening, where there frequently occurs a transverse tearing of the paperboard carton. This tendency to tear is virtually eliminated in the illustrated opening by the provision of the end portions 87 and 87a of the dispensing opening which, partially through their permitting more flexing of the carton top 78 and partially through their disposition in the end panels 79 transversely of the fiber direction, are most effective in confining the carton opening to the line defined by the cut 86, and preventing any tearing of the carton top. It should also be noted that it has been found advantageous to avoid scoring or pre-creasing the carton blank in the path of the end cuts 87 and 87a.

In the formation of a carton from the blank shown in Fig. 11, the tabs 81 and 83 which extend from opposite ends of the side walls 80 and 82, respectively, have their upper edges immediately beneath the end folds 88 (Figs. 8 and 9) of the carton top 78. Consequently, these tab edges provide a support or bearing along the end fold lines 88 and prevent much of the downward pressure which may be exerted on the carton top 78 from being directed along the dispensing opening to the end panels 79. This feature, in conjunction with the flexibility afforded by the end cuts 87 and 87a, and the disposition of the latter trans-

versely of the fiber direction, helps to preserve the carton intact through the opening of the carton and the subsequent repeated usage of the carton as a tissue dispenser.

5 It is seen, therefore, that there is provided by the present invention a novel form of carton which is particularly advantageous in the dispensing of separable sheet material, such as
10 cleansing tissues and the like, particularly when the sheets are interfolded or otherwise arranged for sequential feeding, for example, by a suitable bonding between continuously arranged sheets. The disclosed arrangements for the dispensing opening permits flexing of
15 the carton to relieve the pressure on the tissues so that they may be easily withdrawn without tearing, while maintaining a maximum amount of permanent coverage of the packaged tissues. Furthermore, the disclosed forms of opening
20 provide a fixed and curved disposition of the sheets which aids appreciably in keeping the upper tissue in extended relation to the box, where it can be readily grasped and withdrawn for use. The disclosed arrangement also prevents the extended sheet from falling back into
25 the box, which is particularly troublesome when the tissue is fairly well depleted in a relatively deep box. The invention is not limited in its application to any particular manner of providing for self-feeding of the sheets or any particular type of interfolding and can be used to advantage with any of the known arrangements.

Although shown and described with respect
35 to particular embodiments, it will be apparent that other modifications might readily be made to secure the advantages of the invention without departing from the principles thereof. It should also be understood that the "top panel" referred to in the disclosure is the
40 panel from which the tissue is dispensed and, therefore, may be what might otherwise be considered a bottom, side or end panel in a particular arrangement. Further, while certain advantages are gained by providing a linear cut for the dispensing opening that is perforated,
45 another form of partial severance or a complete cut may also be used, the term "linear cut" being considered generic to any form of partial severance and to a complete cut, whether curving or straight.

What we claim is:—

1. A carton for dispensing sheets arranged for sequential feeding comprising, means
55 defining the walls of a generally rectangularly-shaped box having top, bottom, side and end panels, and means defining a dispensing opening in the top panel of said carton comprising a curved, linear cut extending the length of said
60 carton.

2. A carton as set forth in Claim 1, wherein said linear cut is centro-symmetrically disposed with respect to the longitudinal and transverse axes of said top panel.

65 3. A carton as set forth in Claims 1 and 2,

wherein said linear cut includes a central portion and a pair of curved portions forming a continuation of said central portion which extend generally transversely of the carton adjacent each end of said central portion, said
70 curved portions extending in oppositely facing directions.

4. A carton as set forth in Claims 1 and 2, wherein said linear cut includes a generally
75 straight central portion and a pair of oppositely curving portions disposed at each end of said central portion and forming a continuation thereof, each of said curving end portions being in the form of a loop extending generally transversely of the direction of said central
80 portion, to thereby provide a pair of fingers which project in generally opposite directions from said central portion of said linear cut.

5. A carton as set forth in Claims 1 and 2, wherein said curved linear cut extends from
85 one corner of the carton to the diagonally opposite corner.

6. A carton as set forth in Claims 1 and 2, wherein said curved linear cut is disposed in the top panel so that a line joining the opposite ends of the opening forms an angle no greater
90 than 45 degrees with respect to the longitudinal axis of the top panel.

7. A carton as set forth in Claims 1 and 2, wherein the ends of said curved linear cut are
95 disposed adjacent diagonally opposite corners of said top panel at a distance from the respective corners no greater than one-fourth the length of said top panel, and said cut includes a central portion extending along the longitudinal
100 axis of said top panel and a pair of oppositely curving end portions.

8. A carton as set forth in Claims 1 to 7 for use in combination with a stack of sheets which are interfolded to provide sequential
105 feeding of each of the sheets from the stack in response to movement of the immediately overlying sheet away from the stack, whereby the opening of said linear cut affords flexing of said top panel and provides means for sequential
110 feeding of said sheets from said carton in a manner such that, when the leading one of said sheets is pulled through said dispensing opening and is separated from the stack, the linear cut in said panel is effective to hold the succeeding sheet in fixed, extended relation to the
115 carton.

9. A carton as set forth in Claims 3 and 4, for use in combination with a stack of sheets, which are interfolded to provide sequential
120 feeding of each of the sheets from the stack in response to movement of the immediately overlying sheet away from the stack, whereby the opening of said linear cut affords flexing of said top panel and provides means for
125 sequential feeding of said sheets from the box in a manner such that, when the leading one of said sheets is pulled through said dispensing opening, one of the fingers formed by said curved portions is effective to retard the with-
130

drawal movement of the succeeding sheet, to thereby provide a relative movement between the leading sheet and the succeeding sheet, and whereby the oppositely facing disposition of said fingers is adapted to alternately retard the succeeding sheets during withdrawal of the leading sheets as said succeeding sheets appear on opposite sides of the leading sheet.

10 A carton as set forth in any of the preceding claims, wherein said linear cut is in the form of a line of perforations which are adapted to be broken to thereby form the dispensing opening.

15 11. A carton as set forth in Claims 8 and 9, wherein the stack of sheets comprises a plurality of webs which are interfolded and partially severed transversely of the length of the web and at spaced intervals therealong; to thereby provide separable sheet portions which are bonded together in each of said webs.

20 12. A blank for forming a carton in accordance with Claims 1, 2, 5—8, 10 and 11, comprising a unitary, flexible sheet material including top, bottom, side and end panels defined by crease lines and cuts formed in said sheet, and means defining a dispensing opening in said top panel comprising a curved, linear cut

extending the length of the carton and terminating at the crease lines defining the opposite ends of said top panel.

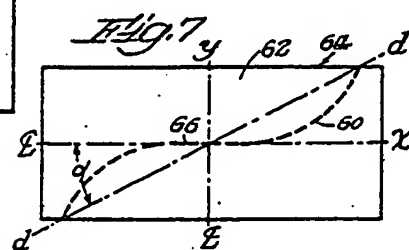
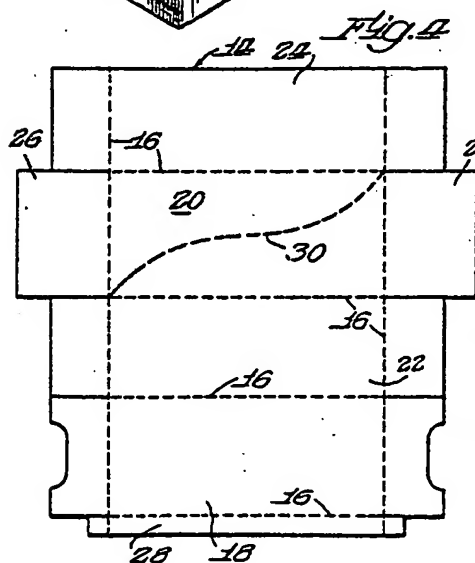
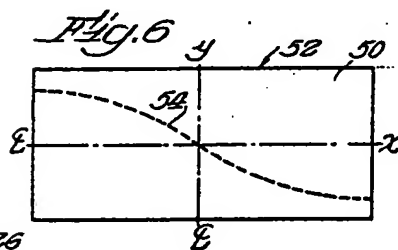
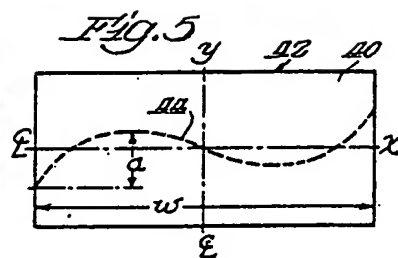
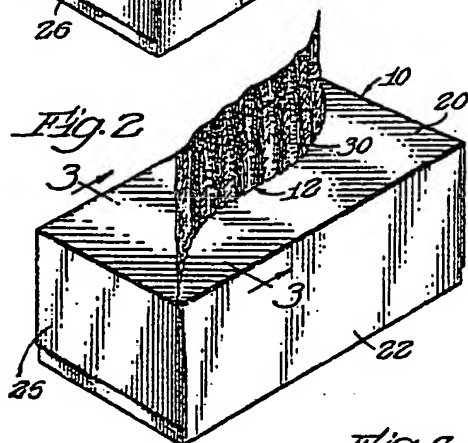
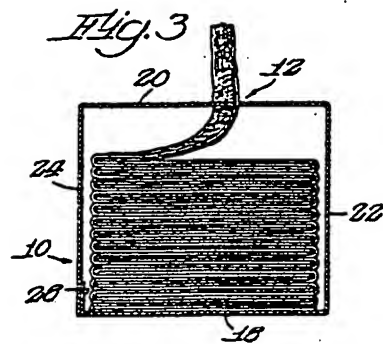
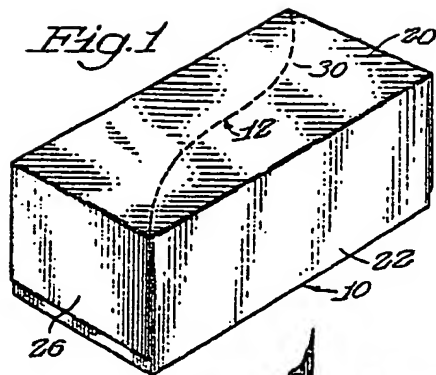
30 13. A blank for forming a carton in accordance with Claims 1—3, 4 and 7—11, comprising a unitary sheet structure including top, bottom, side and end panels defined by crease lines and cuts formed in said sheet, and means defining a dispensing opening in said top panel portion comprising a linear cut extending lengthwise of said top panel and including a pair of oppositely curving portions disposed in spaced-apart relation and defining a pair of fingers which extend generally transversely of said top panel.

40 14. A carton substantially as herein described with respect to Figs. 1 to 3, or Fig. 5, or Fig. 6, or Fig. 7, or Figs. 8 to 10 of the accompanying drawings.

45 15. A blank for forming a carton substantially as herein described with respect to Fig. 4 or Fig. 11 of the accompanying drawings.

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COMPLETE SPECIFICATION

2 SHEETS

This drawing is a reproduction of
the Original on a reduced scale.

SHEETS 1 & 2

Fig. 8

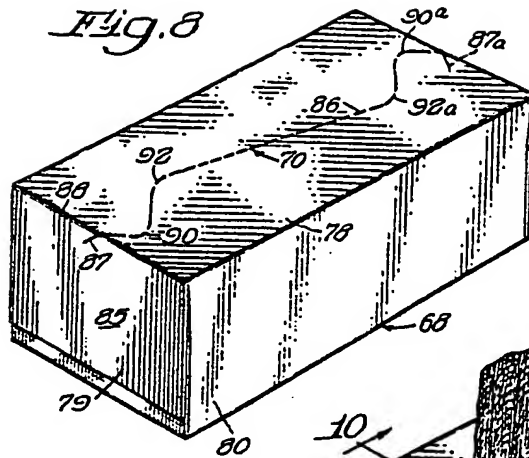


Fig. 9

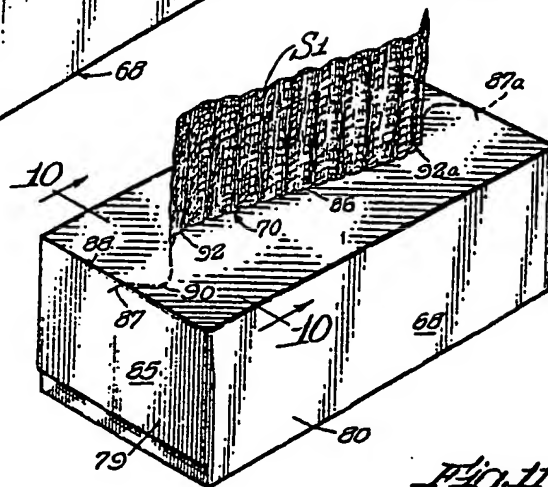


Fig. 10

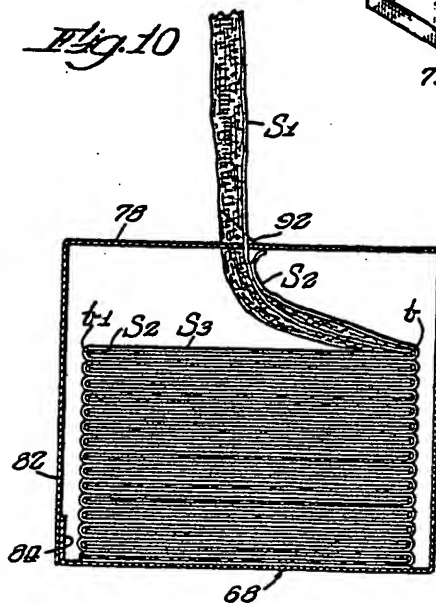
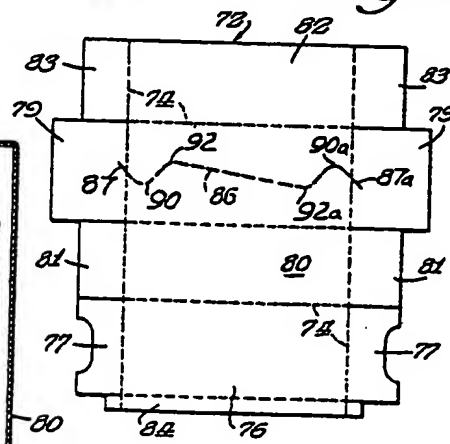


Fig. 11



793,745 COMPLETE SPECIFICATION
 2 SHEETS
 This drawing is a reproduction of
 the Original on a reduced scale
 SHEETS 1 & 2

